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 NEWS  2           "Ask CAS" for self-help around the clock
 NEWS  3  SEP 09   CA/CAplus records now contain indexing from 1907 to the
                   present
 NEWS  4  AUG 05   New pricing for EUROPATFULL and PCTFULL effective
                   August 1, 2003
 NEWS  5  AUG 13   Field Availability (/FA) field enhanced in BEILSTEIN
 NEWS  6  AUG 18   Data available for download as a PDF in RDISCLOSURE
 NEWS  7  AUG 18   Simultaneous left and right truncation added to PASCAL
 NEWS  8  AUG 18   FROSTI and KOSMET enhanced with Simultaneous Left and Righ
                   Truncation
 NEWS  9  AUG 18   Simultaneous left and right truncation added to ANABSTR
 NEWS 10  SEP 22   DIPPR file reloaded
 NEWS 11  SEP 25   INPADOC: Legal Status data to be reloaded
 NEWS 12  SEP 29   DISSABS now available on STN
 NEWS 13  OCT 10   PCTFULL: Two new display fields added
 NEWS 14  OCT 21   BIOSIS file reloaded and enhanced
 NEWS 15  OCT 28   BIOSIS file segment of TOXCENTER reloaded and enhanced

 NEWS EXPRESS  NOVEMBER 14 CURRENT WINDOWS VERSION IS V6.01c, CURRENT
               MACINTOSH VERSION IS V6.0b(ENG) AND V6.0Jb(JP),
               AND CURRENT DISCOVER FILE IS DATED 23 SEPTEMBER 2003
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FILE 'HOME' ENTERED AT 18:04:26 ON 21 NOV 2003

=> file medline uspatful, dgene, embase, wpids, fsta,
COST IN U.S. DOLLARS                            SINCE FILE      TOTAL
                                                   ENTRY    SESSION
FULL ESTIMATED COST                                 0.21       0.21

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FILE 'USPATFULL' ENTERED AT 18:04:46 ON 21 NOV 2003
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=> s holophycobiliprotein
L1 3 HOLOPHYCOBILIPROTEIN

7/31/01 filing Applicant

=> d l1 ti abs ibib tot

L1 ANSWER 1 OF 3 MEDLINE on STN
TI Biosynthesis of a fluorescent cyanobacterial C-phycocyanin holo-alpha subunit in a heterologous host.
AB The entire pathway for the synthesis of a fluorescent **holophycobiliprotein** subunit from a photosynthetic cyanobacterium (Synechocystis sp. PCC6803) was reconstituted in Escherichia coli. Cyanobacterial genes encoding enzymes required for the conversion of heme to the natural chromophore 3Z-phycocyanobilin, namely, heme oxygenase 1 and 3Z-phycocyanobilin:ferredoxin oxidoreductase, were expressed from a plasmid under control of the hybrid trp-lac (trc) promoter. Genes for the apoprotein (C-phycocyanin alpha subunit; cpcA) and the heterodimeric lyase (cpcE and cpcF) that catalyzes chromophore attachment were expressed from the trc promoter on a second plasmid. Upon induction, recombinant E. coli used the cellular pool of heme to produce holo-CpcA with spectroscopic properties qualitatively and quantitatively similar to those of the same protein produced endogenously in cyanobacteria. About a third of the apo-CpcA was converted to holo-CpcA. No significant bilin addition took place in a similarly engineered E. coli strain that lacks cpcE and cpcF. This approach should permit incisive analysis of many remaining questions in phycobiliprotein biosynthesis. These studies also demonstrate the feasibility of generating constructs of these proteins in situ for use as fluorescent protein probes in living cells.
ACCESSION NUMBER: 2001504133 MEDLINE
DOCUMENT NUMBER: 21438034 PubMed ID: 11553806
TITLE: Biosynthesis of a fluorescent cyanobacterial C-phycocyanin holo-alpha subunit in a heterologous host.
AUTHOR: Tooley A J; Cai Y A; Glazer A N
CORPORATE SOURCE: Department of Molecular and Cell Biology, University of California, 142 LSA no. 3200, Berkeley, CA 94720-3200, USA.
SOURCE: PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, (2001 Sep 11) 98 (19) 10560-5. Journal code: 7505876. ISSN: 0027-8424.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200111
ENTRY DATE: Entered STN: 20010913
Last Updated on STN: 20011105
Entered Medline: 20011101

L1 ANSWER 2 OF 3 USPATFULL on STN
TI Engineering of living cells for the expression of holo-phycobiliprotein-based constructs

AB Recombinant cells which express a fluorescent holo-phycobiliprotein fusion protein and methods of use are described. The cells comprises a bilin, a recombinant bilin reductase, an apo-phycobiliprotein fusion protein precursor of the fusion protein comprising a corresponding apo-phycobiliprotein domain, and a recombinant phycobiliprotein domain-bilin lyase, which components react to form the holo-phycobiliprotein fusion protein. Also described are holo-phycobiliprotein based transcription reporter cells and assays, which cells conditionally express a heterologous-to-the-cell, fluorescent, first holo-phycobiliprotein domain.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER:	2003:37640 USPATFULL		
TITLE:	Engineering of living cells for the expression of holo-phycobiliprotein-based constructs		
INVENTOR(S):	Glazer, Alexander N., Berkeley, CA, UNITED STATES Tooley, Aaron J., Berkeley, CA, UNITED STATES Cai, Yuping, Carmel, IN, UNITED STATES		
	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003027285	A1	20030206
APPLICATION INFO.:	US 2001-919486	A1	20010731 (9)
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	APPLICATION		
LEGAL REPRESENTATIVE:	RICHARD ARON OSMAN, SCIENCE AND TECHNOLOGY LAW GROUP, 75 DENISE DRIVE, HILLSBOROUGH, CA, 94010		
NUMBER OF CLAIMS:	24		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	3 Drawing Page(s)		
LINE COUNT:	918		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L1 ANSWER 3 OF 3 EMBASE COPYRIGHT 2003 ELSEVIER INC. ALL RIGHTS RESERVED. on STN

TI Biosynthesis of a fluorescent cyanobacterial C-phycocyanin holo-.alpha. subunit in a heterologous host.

AB The entire pathway for the synthesis of a fluorescent **holophycobiliprotein** subunit from a photosynthetic cyanobacterium (Synechocystis sp. PCC6803) was reconstituted in Escherichia coli. Cyanobacterial genes encoding enzymes required for the conversion of heme to the natural chromophore 3Z-phycocyanobilin, namely, heme oxygenase 1 and 3Z-phycocyanobilin:ferredoxin oxidoreductase, were expressed from a plasmid under control of the hybrid trp-lac (trc) promoter. Genes for the apoprotein (C-phycocyanin .alpha. subunit; cpcA) and the heterodimeric lyase (cpcE and cpcF) that catalyzes chromophore attachment were expressed from the trc promoter on a second plasmid. Upon induction, recombinant E. coli used the cellular pool of heme to produce holo-CpcA with spectroscopic properties qualitatively and quantitatively similar to those of the same protein produced endogenously in cyanobacteria. About a third of the apo-CpcA was converted to holo-CpcA. No significant bilin addition took place in a similarly engineered E. coli strain that lacks cpcE and cpcF. This approach should permit incisive analysis of many remaining questions in phycobiliprotein biosynthesis. These studies also demonstrate the feasibility of generating constructs of these proteins in situ for use as fluorescent protein probes in living cells.

ACCESSION NUMBER:	2001329835 EMBASE
TITLE:	Biosynthesis of a fluorescent cyanobacterial C-phycocyanin holo-.alpha. subunit in a heterologous host.
AUTHOR:	Tooley A.J.; Cai Y.A.; Glazer A.N.
CORPORATE SOURCE:	A.N. Glazer, Natural Reserve System, University of California System, 1111 Franklin Street, Oakland, CA 94607-5200, United States. alexander.glazer@ucop.edu
SOURCE:	Proceedings of the National Academy of Sciences of the

United States of America, (11 Sep 2001) 98/19
(10560-10565).
Refs: 30
ISSN: 0027-8424 CODEN: PNASA6
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 004 Microbiology
LANGUAGE: English
SUMMARY LANGUAGE: English

=> s apophycobiliprotein
L2 1 APOPHYCOBILIPROTEIN

=> d l2 ti abs ibib tot

L2 ANSWER 1 OF 1 USPATFULL on STN
TI Engineering of living cells for the expression of holo-phycobiliprotein-based constructs
AB Recombinant cells which express a fluorescent holo-phycobiliprotein fusion protein and methods of use are described. The cells comprises a bilin, a recombinant bilin reductase, an apo-phycobiliprotein fusion protein precursor of the fusion protein comprising a corresponding apo-phycobiliprotein domain, and a recombinant phycobiliprotein domain-bilin lyase, which components react to form the holo-phycobiliprotein fusion protein. Also described are holo-phycobiliprotein based transcription reporter cells and assays, which cells conditionally express a heterologous-to-the-cell, fluorescent, first holo-phycobiliprotein domain.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
ACCESSION NUMBER: 2003:37640 USPATFULL
TITLE: Engineering of living cells for the expression of holo-phycobiliprotein-based constructs
INVENTOR(S): Glazer, Alexander N., Berkeley, CA, UNITED STATES
Tooley, Aaron J., Berkeley, CA, UNITED STATES
Cai, Yuping, Carmel, IN, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003027285	A1	20030206
APPLICATION INFO.:	US 2001-919486	A1	20010731 (9)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: RICHARD ARON OSMAN, SCIENCE AND TECHNOLOGY LAW GROUP, 75 DENISE DRIVE, HILLSBOROUGH, CA, 94010
NUMBER OF CLAIMS: 24
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 3 Drawing Page(s)
LINE COUNT: 918
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> s bilin and fusion protein
L3 54 BILIN AND FUSION PROTEIN

=> s l3 and heme
L4 28 L3 AND HEME

=> s l4 and oxygenase
L5 11 L4 AND OXYGENASE

=> d l5 ti abs ibib tot

L5 ANSWER 1 OF 11 USPATFULL on STN
TI Individualization of therapy with antihistamines
AB The invention relates to the individualization of therapy on the basis of a phenotypic profile of an individual. More specifically, the present invention relates to the use of metabolic phenotyping for the individualization of treatment with antihistamines.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER:	2003:257772 USPATFULL		
TITLE:	Individualization of therapy with antihistamines		
INVENTOR(S):	Leyland-Jones, Brian, Miami, FL, UNITED STATES		
PATENT ASSIGNEE(S):	Xanthus Life Sciences, Inc., Cambridge, MA (U.S. corporation)		

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2003180823	A1	20030925	
APPLICATION INFO.:	US 2002-325466	A1	20021219	(10)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2001-340827P	20011219 (60)

DOCUMENT TYPE:	Utility
FILE SEGMENT:	APPLICATION
LEGAL REPRESENTATIVE:	HAMILTON, BROOK, SMITH & REYNOLDS, P.C., 530 VIRGINIA ROAD, P.O. BOX 9133, CONCORD, MA, 01742-9133
NUMBER OF CLAIMS:	93
EXEMPLARY CLAIM:	1
NUMBER OF DRAWINGS:	23 Drawing Page(s)
LINE COUNT:	5019

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 2 OF 11 USPATFULL on STN
TI Methods and compositions for diagnosing and treating rheumatoid arthritis
AB The invention provides methods and compositions for diagnostic assays for detecting R.A. and therapeutic methods and compositions for treating R.A. The invention also provides methods for designing, identifying, and optimizing therapeutics for R.A. Diagnostic compositions of the invention include compositions comprising detection agents for detecting one or more genes that have been shown to be up- or down-regulated in cells of R.A. relative to normal counterpart cells. Exemplary detection agents include nucleic acid probes, which can be in solution or attached to a solid surface, e.g., in the form of a microarray. The invention also provides computer-readable media comprising values of levels of expression of one or more genes that are up- or down-regulated in R.A.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER:	2003:220740 USPATFULL		
TITLE:	Methods and compositions for diagnosing and treating rheumatoid arthritis		
INVENTOR(S):	Pittman, Debra D., Windham, NH, UNITED STATES Feldman, Jeffrey L., Arlington, MA, UNITED STATES Shields, Kathleen M., Harvard, MA, UNITED STATES Trepicchio, William L., Andover, MA, UNITED STATES		

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2003154032	A1	20030814	
APPLICATION INFO.:	US 2001-23451	A1	20011217	(10)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2000-255861P	20001215 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: Patent Group, FOLEY, HOAG & ELIOT LLP, One Post Office Square, Boxton, MA, 02109
NUMBER OF CLAIMS: 40
EXEMPLARY CLAIM: 1
LINE COUNT: 25385
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 3 OF 11 USPATFULL on STN
TI HY2 family of **bilin** reductases
AB This invention identifies a novel family of **bilin** reductases. Designated herein HY **bilin** reductases, the enzymes of this invention are useful in a wide variety of contexts including but not limited to the conversion of biliverdins to phytobilins and the assembly of holophytochromes or phytofluors.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
ACCESSION NUMBER: 2003:152713 USPATFULL
TITLE: HY2 family of **bilin** reductases
INVENTOR(S): Lagarias, John Clark, Davis, CA, UNITED STATES
Kochi, Takayuki, Ikoma, JAPAN
Frankenberg, Nicole, Davis, CA, UNITED STATES
Gambetta, Gregory A., Davis, CA, UNITED STATES
Montgomery, Beronda L., Bloomington, IN, UNITED STATES
PATENT ASSIGNEE(S): The Regents of the University of California (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003104379	A1	20030605
APPLICATION INFO.:	US 2001-870406	A1	20010529 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2001-271758P	20010226 (60)
	US 2000-210286P	20000608 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: QUINE INTELLECTUAL PROPERTY LAW GROUP, P.C., P O BOX 458, ALAMEDA, CA, 94501
NUMBER OF CLAIMS: 79
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 23 Drawing Page(s)
LINE COUNT: 4474
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 4 OF 11 USPATFULL on STN
TI Light controlled gene expression utilizing heterologous phytochromes
AB This invention relates to the field of gene expression. In particular this invention relates to the use of heterologous phytochromes to translocate polypeptides into the nucleus of a cell. Where the polypeptides comprise transactivators or repressors this invention provides a system for light-directed gene expression.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
ACCESSION NUMBER: 2003:106324 USPATFULL
TITLE: Light controlled gene expression utilizing heterologous phytochromes
INVENTOR(S): Lagarias, John Clark, Davis, CA, UNITED STATES
Kochi, Takayuki, Daigakusyuku sya, JAPAN
Frankenberg, Nicole, Davis, CA, UNITED STATES
Gambetta, Gregory A., Davis, CA, UNITED STATES
Montgomery, Beronda L., Bloomington, IN, UNITED STATES

PATENT ASSIGNEE(S): The Regents of the University of California (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003073235	A1	20030417
APPLICATION INFO.:	US 2002-159901	A1	20020529 (10)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2001-294463P	20010529 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: QUINE INTELLECTUAL PROPERTY LAW GROUP, P.C., P O BOX 458, ALAMEDA, CA, 94501
NUMBER OF CLAIMS: 14
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 20 Drawing Page(s)
LINE COUNT: 4485
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 5 OF 11 USPATFULL on STN
TI Methods for the inhibition of epstein-barr virus transmission employing anti-viral peptides capable of abrogating viral fusion and transmission
AB Fusion of the viral envelope, or infected cell membranes with uninfected cell membranes, is an essential step in the viral life cycle. Recent studies involving the human immunodeficiency virus type 1(HIV-1) demonstrated that synthetic peptides (designated DP-107 and DP-178) derived from potential helical regions of the transmembrane (TM) protein, gp41, were potent inhibitors of viral fusion and infection. A computerized antiviral searching technology (C.A.S.T.) that detects related structural motifs (e.g., ALLMOTI 5, 107.times.178.times.4, and PLZIP) in other viral proteins was employed to identify similar regions in the Epstein-Barr virus (EBV). Several conserved heptad repeat domains that are predicted to form coiled-coil structures with antiviral activity were identified in the EBV genome. Synthetic peptides of 16 to 39 amino acids derived from these regions were prepared and their antiviral activities assessed in a suitable in vitro screening assay. These peptides proved to be potent inhibitors of EBV fusion. Based upon their structural and functional equivalence to the known HIV-1 inhibitors DP-107 and DP-178, these peptides should provide a novel approach to the development of targeted therapies for the treatment of EBV infections.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
ACCESSION NUMBER: 2003:40533 USPATFULL
TITLE: Methods for the inhibition of epstein-barr virus transmission employing anti-viral peptides capable of abrogating viral fusion and transmission
INVENTOR(S): Barney, Shawn O'Lin, Cary, NC, United States
Lambert, Dennis Michael, Cary, NC, United States
Petteway, Stephen Robert, Cary, NC, United States
PATENT ASSIGNEE(S): Trimeris, Inc., Durham, NC, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6518013	B1	20030211
APPLICATION INFO.:	US 1995-485546		19950607 (8)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1994-360107, filed on 20 Dec 1994, now patented, Pat. No. US 6017536 Continuation-in-part of Ser. No. US 1994-255208, filed on 7 Jun 1994 Continuation-in-part of Ser. No. US 1993-73028, filed on 7 Jun 1993, now patented, Pat. No.

US 5464933
DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Scheiner, Laurie
ASSISTANT EXAMINER: Parkin, Jeffrey S.
LEGAL REPRESENTATIVE: Pennie & Edmonds LLP, Nelson, M. Bud
NUMBER OF CLAIMS: 22
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 84 Drawing Figure(s); 83 Drawing Page(s)
LINE COUNT: 24700
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 6 OF 11 USPATFULL on STN
TI Engineering of living cells for the expression of holo-phycobiliprotein-based constructs
AB Recombinant cells which express a fluorescent holo-phycobiliprotein **fusion protein** and methods of use are described. The cells comprises a **bilin**, a recombinant **bilin** reductase, an apo-phycobiliprotein **fusion protein** precursor of the **fusion protein** comprising a corresponding apo-phycobiliprotein domain, and a recombinant phycobiliprotein domain-**bilin** lyase, which components react to form the holo-phycobiliprotein **fusion protein**. Also described are holo-phycobiliprotein based transcription reporter cells and assays, which cells conditionally express a heterologous-to-the-cell, fluorescent, first holo-phycobiliprotein domain.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
ACCESSION NUMBER: 2003:37640 USPATFULL
TITLE: Engineering of living cells for the expression of holo-phycobiliprotein-based constructs
INVENTOR(S): Glazer, Alexander N., Berkeley, CA, UNITED STATES
Tooley, Aaron J., Berkeley, CA, UNITED STATES
Cai, Yuping, Carmel, IN, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003027285	A1	20030206
APPLICATION INFO.:	US 2001-919486	A1	20010731 (9)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: RICHARD ARON OSMAN, SCIENCE AND TECHNOLOGY LAW GROUP, 75 DENISE DRIVE, HILLSBOROUGH, CA, 94010
NUMBER OF CLAIMS: 24
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 3 Drawing Page(s)
LINE COUNT: 918
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 7 OF 11 USPATFULL on STN
TI Methods for inhibition of membrane fusion-associated events, including respiratory syncytial virus transmission
AB The present invention relates to peptides which exhibit potent anti-viral activity. In particular, the invention relates to methods of using such peptides as inhibitory of respiratory syncytial virus ("RSV") transmission to uninfected cells. The peptides used in the methods of the invention are homologs of the DP-178 and DP-107 peptides, peptides corresponding to amino acid residues 638 to 673, and to amino acid residues 558 to 595, respectively, of the HIV-1.sub.LAI transmembrane protein (TM) gp41.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
ACCESSION NUMBER: 2002:297296 USPATFULL
TITLE: Methods for inhibition of membrane fusion-associated

events, including respiratory syncytial virus transmission

INVENTOR(S): Bolognesi, Dani Paul, Durham, NC, United States
Matthews, Thomas James, Durham, NC, United States
Wild, Carl T., Durham, NC, United States
Barney, Shawn O'Lin, Cary, NC, United States
Lambert, Dennis Michael, Cary, NC, United States
Petteway, Stephen Robert, Cary, NC, United States
Langlois, Alphonse J., Durham, NC, United States

PATENT ASSIGNEE(S): Trimeris, Inc., Durham, NC, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6479055	B1	20021112
APPLICATION INFO.:	US 1995-470896		19950606 (8)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1994-360107, filed on 20 Dec 1994, now patented, Pat. No. US 6017536 Continuation-in-part of Ser. No. US 1994-255208, filed on 7 Jun 1994 Continuation-in-part of Ser. No. US 1993-73028, filed on 7 Jun 1993, now patented, Pat. No. US 5464933

DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Stucker, Jeffrey
LEGAL REPRESENTATIVE: Pennie & Edmonds LLP
NUMBER OF CLAIMS: 44
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 84 Drawing Figure(s); 83 Drawing Page(s)
LINE COUNT: 26553
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 8 OF 11 USPATFULL on STN
TI Directed evolution of biosynthetic and biodegradation pathways
AB The present invention relates to engineering new biosynthetic pathways into microorganisms, in particular biosynthetic carotenoid pathways. New and improved catalytic functions of metabolic pathways are created by, for example, site-specific mutation or gene shuffling techniques, to provide for efficient biosynthesis of carotenoids. By applying the described directed evolution techniques, almost any carotenoid could be produced, in a host cell, from one or a few sets of genes. In addition, the described techniques are useful for creating gene or protein libraries for new and uncharacterized carotenoids.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
ACCESSION NUMBER: 2002:99102 USPATFULL
TITLE: Directed evolution of biosynthetic and biodegradation pathways
INVENTOR(S): Schmidt-Dannert, Claudia, Shoreview, MN, UNITED STATES
Arnold, Frances H., Pasadena, CA, UNITED STATES
PATENT ASSIGNEE(S): CALIFORNIA INSTITUTE OF TECHNOLOGY (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002051998	A1	20020502
APPLICATION INFO.:	US 2000-733759	A1	20001208 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 1999-169594P	19991208 (60)
	US 2000-211894P	20000614 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: DARBY & DARBY P.C., 805 Third Avenue, New York, NY,

10022
NUMBER OF CLAIMS: 31
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 13 Drawing Page(s)
LINE COUNT: 4167
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 9 OF 11 USPATFULL on STN
TI Human respiratory syncytial virus peptides with antifusogenic and antiviral activities
AB The present invention relates to peptides which exhibit antifusogenic and antiviral activities. The peptides of the invention consist of a 16 to 39 amino acid region of a human respiratory syncytial virus protein. These regions were identified through computer algorithms capable of recognizing the ALLMOTI5, 107x178x4, or PLZIP amino acid motifs. These motifs are associated with the antifusogenic and antiviral activities of the claimed peptides.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
ACCESSION NUMBER: 2001:67794 USPATFULL
TITLE: Human respiratory syncytial virus peptides with antifusogenic and antiviral activities
INVENTOR(S): Barney, Shawn O'Lin, Cary, NC, United States
Lambert, Dennis Michael, Cary, NC, United States
Petteway, Stephen Robert, Cary, NC, United States
PATENT ASSIGNEE(S): Trimeris, Inc., Durham, NC, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6228983	B1	20010508
APPLICATION INFO.:	US 1995-485264		19950607 (8)

RELATED APPLN. INFO.: Division of Ser. No. US 1995-470896, filed on 6 Jun 1995 Continuation-in-part of Ser. No. US 1994-360107, filed on 20 Dec 1994 Continuation-in-part of Ser. No. US 1994-255208, filed on 7 Jun 1994 Continuation-in-part of Ser. No. US 1993-73028, filed on 7 Jun 1993, now patented, Pat. No. US 5464933
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Scheiner, Laurie
ASSISTANT EXAMINER: Parkin, Jeffrey S.
LEGAL REPRESENTATIVE: Pennie & Edmonds LLP
NUMBER OF CLAIMS: 62
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 84 Drawing Figure(s); 83 Drawing Page(s)
LINE COUNT: 32166
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 10 OF 11 WPIDS COPYRIGHT 2003 THOMSON DERWENT on STN
TI New recombinant cell comprising a heterologous-to-the-cell, fluorescent, first holo-phycobiliprotein domain fused a heterologous protein domain, useful for expressing a holo-phycobiliprotein **fusion protein**.
AN 2003-466144 [44] WPIDS
AB US2003027285 A UPAB: 20030710
NOVELTY - A recombinant cell expressing a holo-phycobiliprotein **fusion protein** comprising a heterologous-to-the-cell, fluorescent, first holo-phycobiliprotein domain fused a heterologous protein domain, is new.
DETAILED DESCRIPTION - A recombinant cell expressing a holo-phycobiliprotein **fusion protein** comprising a heterologous-to-the-cell, fluorescent, first holo-phycobiliprotein domain fused a heterologous protein domain. The cell makes and comprises

components such as a **bilin**, a recombinant **bilin** reductase, an apo-phycobiliprotein **fusion protein** precursor of the **fusion protein** comprising a corresponding apo-phycobiliprotein domain, and a recombinant phycobiliprotein domain-**bilin** lyase, which components react *inside the cell to form the holo-phycobiliprotein* **fusion protein**.

An INDEPENDENT CLAIM is also included for making a holo-phycobiliprotein **fusion protein** by growing the cell under conditions where the cell expresses the holo-phycobiliprotein **fusion protein**.

USE - The cells are useful for expressing holo-phycobiliprotein-based constructs, useful in enzymology and chemistry of phycobiliprotein synthesis. The phycobiliproteins are useful as in vivo fluorescent protein probes.

Dwg.0/3

ACCESSION NUMBER: 2003-466144 [44] WPIDS
DOC. NO. NON-CPI: N2003-370782
DOC. NO. CPI: C2003-124291
TITLE: New recombinant cell comprising a heterologous-to-the-cell, fluorescent, first holo-phycobiliprotein domain fused a heterologous protein domain, useful for expressing a holo-phycobiliprotein **fusion protein**.
DERWENT CLASS: B04 D16 P13 S03
INVENTOR(S): CAI, Y; GLAZER, A N; TOOLEY, A J
PATENT ASSIGNEE(S): (CAIY-I) CAI Y; (GLAZ-I) GLAZER A N; (TOOL-I) TOOLEY A J; (REGC) UNIV CALIFORNIA
COUNTRY COUNT: 100
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
US 2003027285	A1	20030206	(200344)*		13
WO 2003012448	A1	20030213	(200344)	EN	

RW: AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SK SL SZ TR TZ UG ZM ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG UZ VN YU ZA ZM ZW

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 2003027285	A1	US 2001-919486	20010731
WO 2003012448	A1	WO 2002-US24245	20020730

PRIORITY APPLN. INFO: US 2001-919486 20010731

L5 ANSWER 11 OF 11 WPIDS COPYRIGHT 2003 THOMSON DERWENT on STN
TI Novel isolated HY2 family **bilin** reductase having **bilin** reductase activity, useful for converting biliverdin to phytobilin, and for producing a photoactive holophytochrome and/or phytofluors.
AN 2002-195566 [25] WPIDS
AB WO 200194548 A UPAB: 20030703
NOVELTY - An isolated HY2 family **bilin** reductase (I) comprising an amino acid consensus sequence as given in specification and having **bilin** reductase activity, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) a nucleic acid (II) encoding (I);

(2) a cell (III) comprising a heterologous nucleic acid comprising (II);

(3) a nucleic acid (IV) comprising a nucleic acid that specifically hybridizes with (II) under stringent conditions and that encodes a polypeptide having **bilin** reductase activity, where the nucleic acid does not encode an hvrccr or an atrccr polypeptide;

(4) a cell (V) comprising a **heme oxygenase**; an apophytochrome; and a ferredoxin-dependent **bilin** reductase; where the cell produces a photoactive holophytochrome and where one or more of the apophytochrome and the ferredoxin-dependent **bilin** reductase are expressed by heterologous nucleic acids; and

(5) recombinant nucleic acid (VI) comprising a nucleic acid encoding a functional **heme** oxidoreductase; and a nucleic acid encoding a functional ferrodoxin-dependent **bilin** reductase.

USE - (I) (a ycp2snpy or ycp3snpy) is useful for converting biliverdin to phytobilin where the **bilin** reductase is cyanobacterial, algal, or plant **bilin** reductase which is recombinantly expressed. The **bilin** reductase is contacted with biliverdin ex vivo, or in a cell where the **bilin** reductase is a heterologous polypeptide. The method further involves contacting the phytochromobilin with a second **bilin** reductase such as PeebB to produce a phytochrome or phytofluor. (II) is useful for detecting expression of a polypeptide which involves providing a cell comprising a nucleic acid encoding an apophytochrome; and (II) encoding a **bilin** reductase that produces a phytobilin that assembles with the apophytochrome to produce a phytofluor; and detecting an optical signal produced by the phytofluor. (I) in combination with other enzymes is useful for producing photoactive holophytochrome which involves co-expressing in a cell: a **heme oxygenase** an apophytochrome; and a ferredoxin-dependent **bilin** reductase; whereby the cell produces the photoactive holophytochrome and where one or more of the apophytochrome and the ferredoxin-dependent **bilin** reductase are expressed by heterologous nucleic acids. Preferably, a photoactive holophtochrome that is not a phytofluor, is produced by coexpressing hemoxygenase, an apophytochrome, and ferredoxin-dependent **bilin** reductase such as HY2 family **bilin** reductase (e.g., HY2 or pcyA) in an algal, plant, yeast, bacterial, insect or mammalian cell . Preferably, all the three components are expressed by a heterologous nucleic acids. Optionally, a photoactive holophytochrome that is a phytofluor is produced, where the apophytochrome is expressed as a **fusion protein** with a protein that is to be labeled with the phytofluor. The method preferably involves expressing ferredoxin-dependent **bilin** reductase pebA and/or pebB in a bacterial cell. The method further involves recovering the photoactive holophytochrome from the cell (all claimed).

The availability of genes for **bilin** reductases that mediate the biosynthesis of phytochromobilin, phytocyanobilin (PCB), and phycoerythrobilin (PEB) provides the ability to engineer the biosynthesis of PEB in any biliverdin (BV)-producing organisms. Thus, phytofluors potentially can be produced in any ferredoxin-containing organisms. By introducing the pcyA gene into wild-type and chromophore-deficient mutant plants the wavelength specificity of phytochrome could also be changed which may favorably alter plant growth and development in the field environment. Introduction of the pebA and pebB genes into plants potentially will shunt the conversion of BV to PEB, yielding photomorphogenetically challenged plants with fluorescent phytochromes. This would be especially useful for the analysis of the temporal and spatial patterns of phytochrome expression in plants.

DESCRIPTION OF DRAWING(S) - The figure shows phytochrome biosynthesis in Arabidopsis

Dwg.2/16

ACCESSION NUMBER: 2002-195566 [25] WPIDS
DOC. NO. CPI: C2002-060370
TITLE: Novel isolated HY2 family **bilin** reductase

having **bilin** reductase activity, useful for converting biliverdin to phytobilin, and for producing a photoactive holophytochrome and/or phytofluors.
DERWENT CLASS: B04 D16
INVENTOR(S): FRANKENBERG, N; GAMBETTA, G A; KOCHI, T; LAGARIAS, J C; MONTGOMERY, B L
PATENT ASSIGNEE(S): (REGC) UNIV CALIFORNIA
COUNTRY COUNT: 23
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2001094548	A2	20011213	(200225)*	EN	102
RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR					
W: CA JP					
EP 1290135	A2	20030312	(200320)	EN	
R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR					
US 2003104379	A1	20030605	(200339)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2001094548	A2	WO 2001-US18326	20010605
EP 1290135	A2	EP 2001-942007	20010605
		WO 2001-US18326	20010605
US 2003104379	A1 Provisional	US 2000-210286P	20000608
	Provisional	US 2001-271758P	20010226
		US 2001-870406	20010529

FILING DETAILS:

PATENT NO	KIND	PATENT NO
EP 1290135	A2 Based on	WO 2001094548

PRIORITY APPLN. INFO: US 2001-870406 20010529; US 2000-210286P 20000608; US 2001-271758P 20010226

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=> s recombinant protein
L6       57710 RECOMBINANT PROTEIN

=> s recombinant cell
L7       37598 RECOMBINANT CELL

=> s l7 and protein expression
   5 FILES SEARCHED...
L8        4872 L7 AND PROTEIN EXPRESSION

=> s l8 and fusion protein
L9        4475 L8 AND FUSION PROTEIN

=> s l9 and fluorescent
L10       4105 L9 AND FLUORESCENT

=> s l10 and bilin
L11          1 L10 AND BILIN

=> d l11 ti abs ibib tot

L11  ANSWER 1 OF 1  USPATFULL on STN
TI     Recombinant phycobiliprotein and phycobiliprotein linker fusion proteins
       and uses therefore
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AB This invention is directed to the utilization of the developing methods for molecular manipulation of cyanobacteria and red algae (and potentially cryptomonad algae) to express of phycobiliproteins and phycobiliprotein linker fusion proteins and their utilization as phycobiliprotein, phycobilisome and subassembly based reagents. In particular, the present invention relates to a method for a specific binding assay to determine a target moiety which is a member of a specific binding pair, and provides an improvement in the method comprising using a detectable label which is a **fusion protein** containing both a phycobiliprotein domain and another domain corresponding to a first member of a specific binding pair, where the **fusion protein** binds to a second member of the specific binding pair to provide a detectable labeled complex. The domain derived from the first member of the specific binding pair can be directly fused to the phycobiliprotein or phycobiliprotein linker domain or be separated by a spacer that allows correct folding of both domains.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2001:237667 USPATFULL

TITLE: Recombinant phycobiliprotein and phycobiliprotein linker fusion proteins and uses therefore

INVENTOR(S): Allnutt, F.C. Thomas, Port Deposit, MD, United States
Toole, Colleen Mary, New Winson, MD, United States
Morseman, John Peter, Columbia, MD, United States

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2001055783	A1	20011227
APPLICATION INFO.:	US 2001-882093	A1	20010618 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2000-211784P	20000616 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: BROBECK, PHLEGER & HARRISON, LLP, ATTN: INTELLECTUAL PROPERTY DEPARTMENT, 1333 H STREET, N.W. SUITE 800, WASHINGTON, DC, 20005
NUMBER OF CLAIMS: 46
EXEMPLARY CLAIM: 1
LINE COUNT: 1218

CAS INDEXING IS AVAILABLE FOR THIS PATENT.